

BC

#10
PCT09

RAW SEQUENCE LISTING

DATE: 01/15/2002

PATENT APPLICATION: US/09/622,613A

TIME: 13:06:50

Input Set : A:\Nih343-1subst.app

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3 <110> APPLICANT: Rybak, Susanna M.
4     Newton, Dianne L.
5     The United States of America
6     as represented by The Secretary of the
7     Department of Health and Human Services
9 <120> TITLE OF INVENTION: Recombinant Anti-Tumor RNase
11 <130> FILE REFERENCE: 015280-343100US
13 <140> CURRENT APPLICATION NUMBER: US 09/622,613A
14 <141> CURRENT FILING DATE: 2000-08-17
16 <150> PRIOR APPLICATION NUMBER: US 60/079,751
17 <151> PRIOR FILING DATE: 1998-03-27
19 <150> PRIOR APPLICATION NUMBER: WO PCT/US99/06641
20 <151> PRIOR FILING DATE: 1999-03-26
22 <160> NUMBER OF SEQ ID NOS: 43
24 <170> SOFTWARE: PatentIn Ver. 2.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 312
28 <212> TYPE: DNA
29 <213> ORGANISM: Rana pipiens
31 <220> FEATURE:
32 <221> NAME/KEY: CDS
33 <222> LOCATION: (1)..(312)
34 <223> OTHER INFORMATION: ribonuclease (RaPLR1)
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38 Gln Asp Trp Leu Thr Phe Gln Lys Lys His Leu Thr Asn Thr Arg Asp
39 1          5          10          15
41 gtt gac tgt aat att atc atg tca aca aac ttg ttc cac tgc aag gac      96
42 Val Asp Cys Asn Ile Ile Met Ser Thr Asn Leu Phe His Cys Lys Asp
43          20          25          30
45 aag aac act ttt atc tat tca cgt cct gag cca gtg aag gcc atc tgt      144
46 Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile Cys
47          35          40          45
49 aaa gga att ata gcc tcc aaa aat gtg tta act acc tct gag ttt tat      192
50 Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe Tyr
51          50          55          60
53 ctc tct gat tgc aat gta aca agc agg cct tgc aag tat aaa tta aag      240
54 Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu Lys
55 65          70          75          80
57 aaa tca act aat aca ttt tgt gta act tgt gag aat caa gct cca gta      288
58 Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro Val
59          85          90          95
61 cat ttc gtg ggt gtc gga cat tgc      312
62 His Phe Val Gly Val Gly His Cys
63          100
66 <210> SEQ ID NO: 2
67 <211> LENGTH: 104

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68 <212> TYPE: PRT
69 <213> ORGANISM: Rana pipiens
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75 Val Asp Cys Asn Ile Ile Met Ser Thr Asn Leu Phe His Cys Lys Asp
76           20 21           25           30
78 Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile Cys
79           35           40           45
81 Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe Tyr
82           50           55           60
84 Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu Lys
85  65           70           75           80
87 Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro Val
88           85           90           95
90 His Phe Val Gly Val Gly His Cys
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96 <212> TYPE: DNA
97 <213> ORGANISM: Artificial Sequence
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100 <223> OTHER INFORMATION: Description of Artificial Sequence:Rana pipiens
101      ribonuclease with Met23Leu substitution
102      (recombinant RaPLR1 Met23Leu)
104 <220> FEATURE:
105 <221> NAME/KEY: CDS
106 <222> LOCATION: (1)..(312)
107 <223> OTHER INFORMATION: RaPLR1 Met23Leu
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110 caa gac tgg ctt acg ttt cag aag aag cac ctg aca aac acc cgg gat      48
111 Gln Asp Trp Leu Thr Phe Gln Lys Lys His Leu Thr Asn Thr Arg Asp
112   1           5           10           15
114 gtt gac tgt aat aat atc ctg tca aca aac ttg ttc cac tgc aag gac      96
115 Val Asp Cys Asn Asn Ile Leu Ser Thr Asn Leu Phe His Cys Lys Asp
116           20           25           30
118 aag aac act ttt atc tat tca cgt cct gag cca gtg aag gcc atc tgt      144
119 Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile Cys
120           35           40           45
122 aaa gga att ata gcc tcc aaa aat gtg tta act acc ttt gag ttt tat      192
123 Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Phe Glu Phe Tyr
124           50           55           60
126 ctc tct gat tgc aat gta aca agc agg cct tgc aag tat aaa tta aag      240
127 Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu Lys
128  65           70           75           80
130 aaa tca act aat aca ttt tgt gta act tgt gag aat caa gct cca gta      288
131 Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro Val
132           85           90           95
134 cat ttc gtg ggt gtc gga cat tgc      312

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142 <213> ORGANISM: Artificial Sequence
144 <220> FEATURE:
145 <223> OTHER INFORMATION: Description of Artificial Sequence:Rana pipiens
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147      (recombinant RaPLR1 Met23Leu)
149 <400> SEQUENCE: 4
150 Gln Asp Trp Leu Thr Phe Gln Lys Lys His Leu Thr Asn Thr Arg Asp
151   1                      5                      10                      15
153 Val Asp Cys Asn Asn Ile Leu Ser Thr Asn Leu Phe His Cys Lys Asp
154   20                      25                      30
156 Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile Cys
157   35                      40                      45
159 Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Phe Glu Phe Tyr
160   50                      55                      60
162 Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu Lys
163   65                      70                      75                      80
165 Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro Val
166   85                      90                      95
168 His Phe Val Gly Val Gly His Cys
169                      100
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173 <211> LENGTH: 315
174 <212> TYPE: DNA
175 <213> ORGANISM: Artificial Sequence
177 <220> FEATURE:
178 <223> OTHER INFORMATION: Description of Artificial Sequence:Rana pipiens
179      ribonuclease with Met at position 1 (recombinant
180      Met(-1) RaPLR1)
182 <220> FEATURE:
183 <221> NAME/KEY: CDS
184 <222> LOCATION: (1)..(315)
185 <223> OTHER INFORMATION: Met(-1) RaPLR1
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189 Met Gln Asp Trp Leu Thr Phe Gln Lys Lys His Leu Thr Asn Thr Arg
190   1                      5                      10                      15
192 gat gtt gac tgt aat aat atc atg tca aca aac ttg ttc cac tgc aag      96
193 Asp Val Asp Cys Asn Asn Ile Met Ser Thr Asn Leu Phe His Cys Lys
194   20                      25                      30
196 gac aag aac act ttt atc tat tca cgt cct gag cca gtg aag gcc atc      144
197 Asp Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile
198   35                      40                      45
200 tgt aaa gga att ata gcc tcc aaa aat gtg tta act acc tct gag ttt      192
201 Cys Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe

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202      50      55      60
204 tat ctc tct gat tgc aat gta aca agc agg cct tgc aag tat aaa tta      240
205 Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu
206 65      70      75      80
208 aag aaa tca act aat aca ttt tgt gta act tgt gag aat caa gct cca      288
209 Lys Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro
210      85      90      95
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220 <213> ORGANISM: Artificial Sequence
222 <220> FEATURE:
223 <223> OTHER INFORMATION: Description of Artificial Sequence:Rana pipiens
224      ribonuclease with Met at position 1 (recombinant
225      Met(-1) RaPLR1)
227 <400> SEQUENCE: 6
228 Met Gln Asp Trp Leu Thr Phe Gln Lys Lys His Leu Thr Asn Thr Arg
229 1      5      10      15
231 Asp Val Asp Cys Asn Asn Ile Met Ser Thr Asn Leu Phe His Cys Lys
232      20      25      30
234 Asp Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile
235      35      40      45
237 Cys Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Ser Glu Phe
238      50      55      60
240 Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu
241 65      70      75      80
243 Lys Lys Ser Thr Asn Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro
244      85      90      95
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247      100      105
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251 <211> LENGTH: 315
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253 <213> ORGANISM: Artificial Sequence
255 <220> FEATURE:
256 <223> OTHER INFORMATION: Description of Artificial Sequence:Rana pipiens
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258      substitution (recombinant Met(-1) RaPLR1 Met23Leu)
260 <220> FEATURE:
261 <221> NAME/KEY: CDS
262 <222> LOCATION: (1)..(315)
263 <223> OTHER INFORMATION: Met(-1) RaPLR1 Met23Leu
265 <400> SEQUENCE: 7
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267 Met Gln Asp Trp Leu Thr Phe Gln Lys Lys His Leu Thr Asn Thr Arg
268 1      5      10      15

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270 gat gtt gac tgt aat aat atc ctg tca aca aac ttg ttc cac tgc aag 96
271 Asp Val Asp Cys Asn Asn Ile Leu Ser Thr Asn Leu Phe His Cys Lys
272      20      25      30
274 gac aag aac act ttt atc tat tca cgt cct gag cca gtg aag gcc atc 144
275 Asp Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile
276      35      40      45
278 tgt aaa gga att ata gcc tcc aaa aat gtg tta act acc ttt gag ttt 192
279 Cys Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Phe Glu Phe
280      50      55      60
282 tat ctc tct gat tgc aat gta aca agc agg cct tgc aag tat aaa tta 240
283 Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu
284      65      70      75      80
286 aag aaa tca act att aca ttt tgt gta act tgt gag aat caa gct cca 288
287 Lys Lys Ser Thr Ile Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro
288      85      90      95
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291 Val His Phe Val Gly Val Gly His Cys
292      100      105
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296 <211> LENGTH: 105
297 <212> TYPE: PRT
298 <213> ORGANISM: Artificial Sequence
300 <220> FEATURE:
301 <223> OTHER INFORMATION: Description of Artificial Sequence:Rana pipiens
302      ribonuclease with Met at position 1 and Met24Leu
303      substitution (recombinant Met(-1) RaPLR1 Met23Leu)
305 <400> SEQUENCE: 8
306 Met Gln Asp Trp Leu Thr Phe Gln Lys Lys His Leu Thr Asn Thr Arg
307      1      5      10      15
309 Asp Val Asp Cys Asn Asn Ile Leu Ser Thr Asn Leu Phe His Cys Lys
310      20      25      30
312 Asp Lys Asn Thr Phe Ile Tyr Ser Arg Pro Glu Pro Val Lys Ala Ile
313      35      40      45
315 Cys Lys Gly Ile Ile Ala Ser Lys Asn Val Leu Thr Thr Phe Glu Phe
316      50      55      60
318 Tyr Leu Ser Asp Cys Asn Val Thr Ser Arg Pro Cys Lys Tyr Lys Leu
319      65      70      75      80
321 Lys Lys Ser Thr Ile Thr Phe Cys Val Thr Cys Glu Asn Gln Ala Pro
322      85      90      95
324 Val His Phe Val Gly Val Gly His Cys
325      100      105
328 <210> SEQ ID NO: 9
329 <211> LENGTH: 111
330 <212> TYPE: PRT
331 <213> ORGANISM: Artificial Sequence
333 <220> FEATURE:
334 <223> OTHER INFORMATION: Description of Artificial Sequence:Rana pipiens
335      ribonuclease with (His)6 tag, Met at position 7
336      and Met30Leu substitution (recombinant Met(-1))

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/622,613A

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